

OHEC  
372.357  
059DE/E

# Ontario Department of Education

CIRCULAR 13

INFORMATION, REGULATIONS, INSTRUCTIONS  
AND COURSE OF STUDY

IN

## Elementary Agriculture and Horticulture

FOR

RURAL AND VILLAGE PUBLIC AND  
SEPARATE SCHOOLS

---

PRINTED BY ORDER OF  
THE LEGISLATIVE ASSEMBLY OF ONTARIO

---



TORONTO :

Printed and Published by L. K. CAMERON, Printer to the King's Most Excellent Majesty  
1913

NOTE:—(1) A copy of this Circular is sent to every school. It should be retained in the school for the teacher's use. If additional copies are desired for circulation among the patrons of the school apply to the DEPARTMENT OF EDUCATION, TORONTO, or the DIRECTOR OF ELEMENTARY AGRICULTURAL EDUCATION, ONTARIO AGRICULTURAL COLLEGE, GUELPH.

(2) A list of the publications issued by the Department of Education dealing with the teaching of Agriculture will be found on the last page.







# Ontario Department of Education

CIRCULAR 13

INFORMATION, REGULATIONS, INSTRUCTIONS  
AND COURSE OF STUDY

IN

## Elementary Agriculture and Horticulture

FOR

RURAL AND VILLAGE PUBLIC AND  
SEPARATE SCHOOLS

---

PRINTED BY ORDER OF  
THE LEGISLATIVE ASSEMBLY OF ONTARIO

---



TORONTO :

Printed and Published by L. K. CAMERON, Printer to the King's Most Excellent Majesty  
1913

---

NOTE :—(1) A copy of this Circular is sent to every school. It should be retained in the school for the teacher's use. If additional copies are desired for circulation among the patrons of the school apply to the DEPARTMENT OF EDUCATION, TORONTO, or the DIRECTOR OF ELEMENTARY AGRICULTURAL EDUCATION, ONTARIO AGRICULTURAL COLLEGE, GUELPH.

(2) A list of the publications issued by the Department of Education dealing with the teaching of Agriculture will be found on the last page.



Cur  
Cur 13  
1913

Ministry of Education, Ontario  
Historical Collection



INFORMATION, REGULATIONS, INSTRUCTIONS, AND COURSE  
OF STUDY RELATING TO ELEMENTARY AGRICULTURE  
AND HORTICULTURE IN RURAL AND VILLAGE  
PUBLIC AND SEPARATE SCHOOLS.

---

I. GENERAL INFORMATION

Instruction in  
Agriculture  
desired for  
country  
children.

1. The Department of Education for the Province of Ontario, co-operating with the Department of Agriculture, provides for instruction in Elementary Agriculture and Horticulture in the rural and village schools to the end that the needs of country life may be more adequately met in the education provided for country children.

Subject  
not obliga-  
tory.

2. The introduction of the subject is not obligatory. Previous efforts to introduce it have shown that success depends very largely on a strong supporting public opinion. The work cannot be successfully carried on where trustees and ratepayers do not believe in it or desire it.

Meaning of  
Agriculture  
as a School  
Subject.

3. The teaching of Agriculture means more than the mere introduction of a new subject. It means a new method! It means a new purpose! It means a new school! It means *Education for Country Life!*

The Trustees  
to encourage  
the work.

4. When the work is undertaken in any school it will be necessary for the Board of Trustees to arrange for its introduction and support, thus sharing with the teacher the effort to insure success.

Instruction to  
be based on  
practical  
work.

5. Besides the instruction in the class-room the work will be carried into effect through the encouragement of home gardening schemes, children's progress clubs, experimental and observation plots, as well as flower beds and borders on the school grounds, and other practical measures.

Two plans  
for carrying  
on practical  
work.

6. The practical part of the work may be carried out in either one of two ways: (1) A Home Gardening Plan, (2) A School Gardening Plan.

Additional  
land not  
necessary.

7. For carrying on the experimental and observation plots, the pupils' individual plots, or the flower plots and borders on the school grounds in connection with the work, the purchase of additional land is not necessary. So long as the pupils are not deprived of adequate play-ground accommodation, the work may be conducted in the school grounds, these being of the standard size required by the regulations; and in such cases provision should be made for the protection of



the school plots against damage from the games. Where extra land is rented, loaned or purchased, it should adjoin the school grounds or be within very close reach. The greatest care should be taken to prevent injury by dogs, poultry, or stray cattle; grants cannot be paid for gardens or plots which are destroyed through lack of such care. Suitable arrangements must be made for caring for the gardens in the holidays as well as for harvesting any crops that may be ready at that time.

Director of  
Elementary  
Agricultural  
Education.

8. The work shall be under the general supervision of the *Director of Elementary Agricultural Education*. He will assist in carrying out the work by arranging for experiments and demonstrations, supplying charts, instruction sheets, bulletins, leaflets for pupils, material for sowing, etc. The work of inspection and supervision by Inspectors and Field Agents will be under his charge.

Practical  
work of  
two grades.

9. The work in the schools will be taken up in a practical way (1) under teachers competent but not specially certificated, and (2) under teachers holding special certificates in *Elementary Agriculture and Horticulture*.

Training of  
Teachers.

10. Teachers will receive certificates in *Elementary Agriculture and Horticulture* upon the satisfactory completion of (1) a ten weeks' spring course at the Ontario Agricultural College, (2) two summer sessions at the College and a directed winter's reading course, or (3) a course in Agriculture at a High School, followed by a further course at the Normal School and one summer session at the Ontario Agricultural College.

No text book  
required.

11. As the work of instruction is based on the personal observation, investigation, or experimentation of the pupils and not on lessons from a book, no prescribed text-book is required. In general, however, the work treated in James's *Agriculture* should be taken by the teacher as a guide.

Course of  
study permits  
freedom of  
choice.

12. The course of study is arranged from the agricultural topics suggested in the Nature Study outline. As the subject is such a wide one and the local interests throughout the Province so diversified, teachers are free to select such work as best meets local conditions.

## II. REGULATIONS

*Should the Departmental appropriation for this work not be sufficient to pay in full the sums apportioned on the following bases, the Department of Education will make a pro rata apportionment.*

Schools  
entitled to  
grants.

1. A rural School Board or a School Board of a village that provides and maintains satisfactorily to the Minister throughout the year a course of instruction in Elementary Agriculture and Horticulture shall be entitled to special grants as specified



hereunder; in no case, however, will the grant exceed the total amount expended by the Board during the calendar year for the work. If the teacher leaves at the summer holidays, due consideration will be shown provided an effort is made by the new teacher and the trustees to have the work of the year completed satisfactorily.

**Teacher entitled to grant.** 2. To the teacher who carries out this work satisfactorily on the reports of the Inspector and of the Director, the Minister will pay, in addition to the salary paid by the School Board, an additional grant, as specified hereunder.

**Notice to be given of intention to qualify for grants.** 3. Schools intending to undertake for the first time, or to continue this work, and thus qualify for the entire annual grants, must notify the Director of Elementary Agricultural Education at as early a date as possible before December 31st on the form provided in the School Register. This notice shall be signed by the Secretary as well as the teacher.

**Notifications accepted up to April 15th for remaining portion of year.** 4. Notifications received later than the beginning of the year, unless under the circumstances explained in Section 30, page 15, will be accepted for the portion of the year remaining after the receipt of the notice, but no notifications will be accepted for participation in grants after April 15th.

**Grant to Trustees unaltered by change of teacher.** 5. When the work is commenced under an uncertificated teacher and afterwards comes under the charge of a certificated teacher, the grant payable to Boards of Trustees for that year will be that one to which they were entitled at the time the notification of intention to qualify for the grant was sent in.

**One hour a week required throughout the year.** 6. The time allotted to the work shall amount to at least one hour a week during the year; a definite time must be allotted for the work of instruction, satisfactory to the Inspector or Director. Any time taken for the instruction of the classes before or after the regular school hours may be counted.

**Calendar year marks year's work.** 7. For the purposes of apportioning grants for this work, including practical gardening, the year will be the calendar year (January to December) and not the school year.

**Teacher to keep records and report to Minister.** 8. Throughout the year the teacher shall record from week to week on the special form provided in the School Register the work carried on in the garden and the instruction given in the school. At the end of the year (December) these records shall be forwarded by the teacher as a report to the Minister of Education through the local Inspector. As this report is the guarantee of instruction having been given, no grants shall be paid to either trustees or teachers unless this report is sent in.



Pupils to  
keep records.

9. The pupils in the classes receiving instruction shall keep records systematically in special agricultural note-books or garden journals of the instruction given and the practical work carried out in their gardens. These records will be available for inspection by the Inspector or Field Agent.

Garden  
account to  
be kept  
separate and  
statement  
sent to  
Minister.

10. The accounts for the work shall be kept separate from the general school expenditure, and a financial statement submitted on the special form provided in the School Register, by the Secretary to the Minister through the local Inspector in December. The totals of the receipts and expenditures shall, however, also be included in the General Financial Statement of the Board to the Department of Education. No grants can be paid to a school until these reports are received.

Uses to which  
grants may  
be applied.

11. The legislative and any municipal grants for the purposes of Elementary Agricultural Education shall be spent solely for the purpose of promoting the cause of agriculture and horticulture in the community through the work of the school.

Transference  
of equipment.

12. When an equipment on which the legislative grant has been paid to its full value remains unused for two years, the Minister may direct the transfer of said equipment to one of the other schools of the Province.

Grants.

13. The grants payable to trustees and teachers with the requirements for earning the same are as shown in the following schedule:



## Grants

Requirements.	Where teacher is not certified in Agriculture				Where teacher is certificated in Agriculture, or receives the certificate during the year			
	To Trustees	To Teacher			To Trustees	To Teacher		
		For full year	For winter and spring term	For fall term		For full year	For winter and spring term	For fall term
<b>A. FIRST PLAN</b>								
(1) Instruction throughout the whole year, to be completed satisfactorily, with requirements regarding pupils' records, teacher's report, trustees' statement, etc., fulfilled.	Up to but not exceeding \$8.00				Up to but not exceeding \$20.00			
(2) Supervised home gardens or projects by pupils of Forms III, IV and V.								
(3) Well kept grass and flower plots, borders, screens, etc., at school for beautifying grounds and for instructional purposes.								
<b>B. SECOND PLAN</b>								
(1) Instruction throughout the whole year to be completed satisfactorily, with requirements regarding pupils' records, teacher's reports, trustees' statement, etc., fulfilled.	Up to but not exceeding \$12.00				Up to but not exceeding \$30.00			
(2) A well conducted pupils' school farm or school garden, at or in connection with the school, having at least six square rods for experimental and observation plots of local use and interest.								
(3) Well kept grass and flower plots, borders, screens, etc., for beautifying grounds and for instructional purposes.								
(4) For other pupils of Forms III, IV and V, not represented in the work on the six square rods, either additional plots in the school garden, or supervised gardens or projects at home.								

**NOTE.**—It is to be understood that the pupils in Forms I and II also will take part in the garden work at school or carry on work at home as far as practicable.



### III. GENERAL INSTRUCTIONS

**Uses to which grants may be applied.**

1. As stated in the Regulations, all grants for this work are to be spent solely for promoting the cause of agriculture and horticulture in the community through the work of the school.

This provision permits expenditures for the rental of additional land; for preparing, manuring, or fencing off the garden; for overseeing and caring for the garden through the summer holidays; for improvement of school outbuildings or grounds by purchase of vines; for establishing of arboretum or reforestation of waste area of school property; for the purchase of a Babcock milk tester, magnifying glasses for seed studies, meteorological instruments, soil tubes or simple apparatus to be used in demonstrating features of the work; for buying tools, such as needed to keep up repairs of fences or garden tools, or to make simple appliances needed in the garden work; for provision of seeds, bulbs, garden tools, tool racks, labels, garden lines, window boxes, hot beds, cold frames, grass clippers, lawn mower, etc.; for the purchase of agricultural or horticultural books and charts (not nature study charts), or subscriptions to agricultural or horticultural journals for school library.

**Director to be consulted regarding unusual expenditures.**

2. Before entering upon an expenditure for anything not specified above and involving a considerable portion of the grant, teachers and trustees shall consult the Director. Expenditures should not be made merely for the sake of using up all the grant; nothing except that which will be put to profitable use should be purchased.

**Work should be tested before heavier expenses are made.**

3. As the success of this work depends largely on popular favour, it is not desirable in most cases to use grants for any extensive expenditures until there is assurance of the permanency of the work. For example, it is not advisable to build an expensive fence around the garden plots nor to erect a garden tool-house. At first an inexpensive fence of chicken netting will suffice for plots requiring protection and the garden tools may be kept in the school.

**Reduction of claims for grants desirable to help other schools.**

4. After the work has been well established at a school and all necessary equipment secured, it should not be necessary for Trustees to expend more than is required for the up-keep of the work.

**An Agricultural Bulletin Board recommended.**

5. An Agricultural Bulletin Board should be provided in the school. It will be found a valuable help in the work of instruction, and can be made at little expense by fastening to the wall a panel of burlap, cork, linoleum or soft wood, such as basswood. Specimens of weeds, clippings from papers, pictures from journals, agricultural charts, pupils' exercises, new bulletins, school announcements, reports on experiments and such things of interest to the whole school can in this way be readily exhibited. If a ledge is made at the bottom of the board, objects which cannot be hung up may be shown to advantage. This board may be made in connection with the Agricultural Book Shelf.



An Agricultural Book Shelf Recommended.

6. An Agricultural Book Shelf should also be provided. This should be easy of access in the school-room, either in the library or in connection with the Agricultural Bulletin Board. For this there should be provided such books and pamphlets as are included in this recommended list:

Bailey's "Manual of Gardening."  
 Rexford's "Flowers and How to Grow Them."  
 Green's "Vegetable Gardening."  
 Bailey's "Principles of Fruit Growing."  
 King's "The Soil."  
 Warington's "The Chemistry of the Farm."  
 Robinson's "Principles and Practice of Poultry Keeping."  
 Dean's "Canadian Dairying."  
 Plumb's "Types and Breeds of Farm Animals."  
 Root's "The A B C and X Y Z of Bee Culture."  
 Warren's "Farm Management."  
 Mann's "Beginnings in Agriculture."  
 Warren's "Elements of Agriculture."  
 Dominion Department of Agriculture's "Farm Weeds of Canada,"  
 The bulletins and reports of the Ontario and Dominion Departments of Agriculture.  
 A subscription to one or more of the agricultural journals.

Other books dealing with local agriculture should be added to the library as required. These books are listed in the catalogue of Library Books published by the Department of Education.

It will not be necessary to buy all the books at the commencement of the work; they may be purchased gradually.

Pupils should be encouraged to take the books home for the use of other members of the family.

Reading to be encouraged.

7. While there is no text-book prescribed for the work, it is important that pupils should be interested in reading for themselves upon agricultural topics, introduced to the best books, bulletins and journals, and trained to use them in connection with their class studies, debates and experiments. The agricultural books should not be kept behind locked doors, but rather where pupils can get them without much trouble.

Agricultural Education Bulletins are official publications concerning this work.

8. The *Agricultural Education Bulletins*, issued from time to time by the Department of Education, furnish information about the progress of the work in Ontario, and offer suggestions to teachers and trustees for carrying it on. Two copies of each of these bulletins are sent to every rural school. One is for the teacher and should be retained for use in the school; the other is for circulation amongst the ratepayers. Every teacher who is qualifying for special grants in agriculture should have an intimate knowledge of the contents of these bulletins.



Limited local  
opposition  
can not dis-  
qualify for  
grants.

9. In carrying on the practical work either in home gardens or a school garden, failure to get every pupil to take up the work, on account of strong opposition at home or other adequate cause, will not disqualify teacher or trustees from receiving grants.

Small estab-  
lished gardens  
do not need to  
be enlarged.

10. Where the work has been already well established and is now successfully carried on in a smaller area than the minimum required, and it is not possible to enlarge, the area provided will be accepted in qualifying for the grants.

Location of  
School garden.

11. The school garden should not be located in an out-of-the-way place on the school grounds. If possible, it should be at the front or side of the school house and within full view of passers-by on the road. If space cannot be taken from the school grounds for it, it may be carried on in nearby grounds or in a neighbour's field. Good work might be done in taking charge of the garden of some one living near the school as a loan or on a rental basis.

Equipment  
required.

12. The amount of equipment for carrying on garden work at school is not specified. At some schools, all the work is carried on with tools brought from the pupils' homes. There are some advantages in this plan for the first year's effort.

For an average school six rakes, six hoes, one digging fork, one shovel, a pronged trowel, two watering cans, a wheel barrow, one mallet, a plentiful supply of garden lines and corner stakes, a hammer and saw will likely suffice. This outfit will cost about \$12.00. Grass shears, a sickle and a lawn mower will increase this amount by about \$6.00. At odd times a few extra tools may have to be borrowed.

The tools should be put under the charge of a tool officer or garden committee of the pupils.

Uses of area  
specified for  
school garden.

13. The six square rods specified as the minimum area for the experimental plots in a school garden qualifying for grants is exclusive of paths. It is suggested that as a rule three square rods should be given to experiments or demonstrations on field crops, and three square rods devoted to experiments or demonstrations on vegetables, plant propagation, etc. The interests of the locality, however, will be the best guide in selecting experiments, and in some cases it may be considered best to give all the space to field crops, or, on the other hand, to vegetables.

The space devoted to flower-growing can hardly be specified, as it will be best to grow the flowers in beds or borders along the walks, around the experimental plots, or about the school house and fences. In a school of twenty-five pupils, however, an area equal to at least one square rod should be given to flowers.

Smaller plots  
for small  
children.

14. For the smaller pupils, in either home or school garden work, small plots containing easily grown flowers or vegetables or both may well be encouraged. For the older pupils there are advantages in having the work done under conditions similar to those they will meet in actual life.



Ontario  
School Garden  
should be ex-  
perimental  
farm and  
beauty spot of  
neighbour-  
hood.

15. In the School Garden that should be aimed at for every Ontario School two features should be kept clearly in mind.

First: The garden should contain from year to year a few well planned and well conducted experiments and demonstrations on fruits, vegetables or field crops of interest and value to the whole neighbourhood. This part of the garden will constitute a small "experimental farm" for every school section, full of valuable lessons in agriculture.

In it the older pupils of the school, while being trained to "do something in order that they may learn something," will be trained also to co-operate for public service. The things they do will be for the benefit of all.

Secondly: The garden, *i.e.*, the school grounds, should contain neat grass plots, flower beds and borders for the purpose of training children to care for tidy surroundings, to grow flowers and also to make the school premises attractive as the local "beauty spot."

Work should  
be consistent-  
ly planned and  
progressive.

16. The garden work should be planned to develop a consistent and progressive series of studies from year to year, and not allowed to become a matter of aimless repetition; pupils should advance into more difficult work just as they do in arithmetic or other school studies. The interests of the locality should be considered in selecting the work. Teachers should leave records of the work they have carried out for the guidance of their successors, and as a permanent history of the teaching of agriculture in the school section.

School garden  
should be a  
Community  
Garden.

17. The experiments and demonstrations that are carried out in the school garden should be made widely known throughout the neighbourhood. The pupils who are conducting the work should be led to think of their work as being for the benefit of the community as well as for themselves and their school. Surplus garden produce should not be wasted or selfishly distributed; as a "community garden" everyone should share in its gifts. Plans for the garden work of the following season might be considered by the ratepayers at the Annual School Meeting. Trustees or other interested persons should be encouraged to conduct experiments in the school garden. Boys or girls who have left school might undertake some of the experiments also. In a school where there are only a few pupils in the senior classes, this plan will enable a teacher to secure help and experiments for the six square rods required.

Vegetable  
Garden may  
be planned as  
a Farmer's  
Home Garden.

18. Instead of having the pupils carry out the work in small separated plots, teachers are quite free to plan the garden along the lines of a farmer's home garden: *it is not the form or style of the garden that is of first consideration.* This plan does not prevent the pupils from making the work experimental. Everything done in the garden should have a *purpose*.



Flower growing at school as at home.

19. The aim in the flower growing side of the garden work should be to make the school like a beautiful home. It will be best carried out in flower borders and beds suitably arranged alongside the walks, or about the school house and fences, just as it might be at the pupil's home. Work in caring for the vines and shrubbery, the hanging baskets, the window boxes, the perennial border, the wild flower plot, the lawn, the paths, the roadside in front of the school may all be considered properly school garden work.

Care of grass plots part of school gardening.

20. In considering the care of a school lawn, *i.e.*, the grass plots, as part of the school garden work, it is not intended that the entire school grounds are to be kept by the pupils as a lawn, but rather that at the front of the school and around the flower beds and experimental plots, neat grass plots should be in evidence. School ground improvement schemes might be planned to cover a series of years, each year adding an additional area to the improved area.

Preliminary Preparations for School Ground Improvement.

21. Before anything is done in setting out ornamental shrubbery on the school grounds, all preliminary work of grading and draining should be completed. See "Improvement of School Grounds" published by the Department of Education in 1908 for suggestions for this work.

The Department of Landscape Gardening of the Ontario Agricultural College assists schools in this when they have made due preparation for it by enlarging, draining, and grading the grounds. There is no use in considering any elaborate scheme of school ground improvement before these matters are attended to locally.

Home Gardening Projects.

22. The work carried out by pupils at their homes does not need to be confined to special plots. Some pupils may take charge of the home vegetable garden, the home flower garden, or the lawn, as their project. The work may be the common undertaking of the School Progress Club in growing tomatoes, corn, potatoes or oats. Chicken-raising or the care of the home flock may be accepted as a substitute. Some of the work should be of an experimental character: doing something definite for the purpose of learning something exact.

Summer Holiday care of a School Garden not a Caretaker's Job.

23. The summer holiday care of a school garden that is planned and conducted along proper educational lines must not degenerate into a caretaker's job. The school garden is for the education of children and indirectly for the people of the neighbourhood; if it has not meaning enough and educational purpose enough in it to secure voluntary good care from pupils and parents, it has no right to exist.

There may be some work in the garden not connected directly with the pupils' plots for which payment will have to be made. For such work arrangements should be made wherever possible with some of the pupils for a small allowance. A few dollars should cover all the expenses of caring for the garden during the holidays at any school.

In no case should pupils be paid to look after their own plots.



What to do  
with unused  
or neglected  
gardens.

24. Where, for any reason, the school garden work ceases at a school, the land used for the garden should not be allowed to grow up in weeds and become an eyesore. It should be cleaned up and put into grass, or loaned to someone who will keep it clean and put it to good use.

Also, if a garden, commenced in the spring, becomes an eyesore in the summer through neglect, it should be plowed down before it brings discredit on the school and the undertaking.

Pupils not to  
be paid for  
work in plots.

25. No part of the money provided in the grants is to be used for paying pupils for work on their plots. It would be just as reasonable to pay them for their work in arithmetic. If any of the boys, however, undertake to dig the garden, the money that would otherwise have to be paid may be allowed them provided the work is done satisfactorily. While it is desirable that pupils be trained to value the time and labour expended in the garden work, it is not desirable that a mercenary disposition be developed towards the work.

Work to be  
under direc-  
tion of one  
teacher.

26. In the case of a graded school where the pupils of Form III and those of Form IV are in separate rooms, the teacher who has undertaken to give the instruction in agriculture should either take all the classes himself (or herself) or direct the instruction given by the other teacher and see that all requirements are fulfilled.

A School  
Progress Club  
may assist  
greatly in  
practical  
work.

27. The work carried out by the pupils in home gardens may be put largely under the management of the children themselves, organized as a *School Progress Club*. Under this scheme the Club may arrange for experiments for its members, undertake a large share of the inspection of the plots and carry out plans for papers and discussions on the work at the Friday afternoon meetings of the Club. The teacher's chief office will be to encourage and direct the work.

The work carried out in the garden at school may be managed in this way also to the advantage of the work and the pupils.

The continu-  
ance of the  
work rather  
than the  
commence-  
ment should  
be considered.

28. The immediate commencement of the work is not to be desired so much as a favourable commencement. It is the continuance of the work and not the commencement that should be considered chiefly. It should not be undertaken without carefully planning. It is very desirable that the teacher undertaking the work should remain throughout the calendar year, and that he or she should have the active co-operation of the trustees. If a teacher who is leaving his or her school at summer holidays knows with some certainty that the trustees and ratepayers will endeavour to have the work continued under the new teacher, there may be justification in such cases for a commencement being made. Without such assurance, it will be better not to make a start.



Fall Preparation for Spring Work. 29. If possible the land required for the school plots or the children's home plots should be well prepared in the fall.

Reasonable delay in Notification permitted in case of New Teacher. 30. When a new teacher takes charge of the school at New Year, and consequently it is impossible to have the teacher's signature to the notification due by December 31st, a reasonable time will be allowed trustees and teacher for sending in such notification without disqualification for any part of the full year's grant.

Supervision of House Gardens 31. Teachers should arrange to see the pupils' work at least twice during the season. The visit to the pupil's home will present opportunities for talking over matters with the parents on other matters besides Agriculture. The chief values that will come from supervision will lie in the encouragement given the pupil and the prevention of carelessness.

IV. COURSE OF STUDY

The course of study printed below is that which appears in the School Register in connection with the Teacher's Report required under the regulations.

The instructions given for recording the work done are included here-with also.

INSTRUCTIONS:

- (1) Teachers desiring help in any phase of the work should write the *Director of Elementary Agricultural Education, Ontario Agricultural College, Guelph.*
- (2) In accordance with the Regulations (see Circular 13) teachers are required to record weekly the work done in order to qualify for grants. Pupils also in the upper classes are to keep records of instruction received and work done; for this separate and uniform note books should be used.
- (3) This report, endorsed by the teacher, is to be transmitted to the Department of Education through the local Inspector. Teachers should arrange to forward it to their Inspectors at the close of the school term before Christmas, along with the Trustees' statement of expenditure.
- (4) The work herein suggested is based on the course outlined in Nature Study. *It is not expected that all the work can be covered.* Teachers will use their own judgment in the choice of topics. The work should bear directly on local interests, and be of a practical character. At least one hour a week is to be given to the work.
- (5) While the records must necessarily be brief, they must indicate clearly *what has been done and how it has been done, e.g.: April 10th—With pupils' help, pruned old apple tree in school yard; all prepared for work by reading, enquiry and discussion. Pupils recorded work in 'before and after' drawings.*
- (6) Most of the work of instruction must be of necessity with the pupils in the highest classes. It is to be practical as far as possible; merely talking and reading about topics will not answer; observation, investigation and experimenting by the pupils should form a basis for lessons.
- (7) Teachers are recommended to keep a duplicate of this Report for their own or others' guidance in future years. Extra forms may be had on application to the Director.
- (8) To prevent delays, misunderstandings or mistakes regarding grants, teachers leaving in June should take care to leave their records complete, properly endorsed and in safe hands, also to show thir new addresses.

School .....	Teacher .....
No. and Township .....	When Certificate in Agriculture was obtained .....
County .....	P.O. Address.....
Inspector .....	



## JANUARY

**Plant Studies**—Investigation of district's forest-tree areas with maps and census—Trees represented in firewood and sawlogs—Arithmetic problems on lumber, sawlogs and woodpiles—Plans for conserving local forests, reforesting waste lands or establishing school arborutum—Value of ashes and saving of same for garden.

**Animal Studies**—Breeds of farm animals with local surveys and references.

**Pupils' Progress Clubs**—Organization for boys' work in poultry improvement (Poultry Club); and seed improvement (Corn, Oat, Barley or Potato Clubs), and for girls' work in home-cooking or sewing, growing and canning tomatoes or cultivating flowers (Tomato or Flower Clubs); winter reading in connection with these.

**Physical Science**—Practical lessons on air and liquid pressures—Common pump, barometer, lactometer.

## FEBRUARY

**Plant Studies**—1. Germination tests of seed to be sown on local farms—Structure of little plants—Effects of light, heat and moisture on growth.

2. Study of apple or other fruit tree twigs to learn age, markings, fruit and leaf buds, etc.

**Farm Crops**—Study of structure of head of wheat and wheat grain—Comparison with oats, barley, corn—The legumes and their tubercles.

**Milk Studies**—Determination of specific gravity—Estimation of fat with Babcock Test—Pupils' cow testing work at home—Cow Testing Associations under Department of Agriculture, Ottawa.

**Physical Science**—Simple applications of electricity and steam.

## MARCH

**Plant Studies**—Estimation of weed-seed impurities in seed to be sown locally; testing seed for germibility—Grading of seed samples under the Seed Control Act.

**Farm Work**—Maps of home farms showing the proposed plans of cropping—Rotations—Systems of farming.

**Garden Work**—Commencing seeds in boxes in windows or hot bed—Preparing stakes, labels, tools, window boxes, hanging baskets—Purchasing seeds, fertilizers, etc.—Settling plans for garden experiments.

**Soil Studies**—A simple analysis—Classification of samples of soils—Water holding capacities—Effect of lime on clay—Soil maps of pupils' home farms—Local drainage schemes and possibilities.

## APRIL

**Plant Studies**—Grafting and pruning—Practice on neglected trees—How to restore an old orchard.

**Farm, Garden and Orchard Work**—Implements used in spring work—Their principles of construction—How and why used—Spraying outfits—Preparation and uses of fungicides and insecticides.

**Farm Arithmetic**—Problems based on actual local operations—Cost of plowing, harrowing, seeding, rolling, cultivating.

**Garden Work (for April or May)**—Preparing the ground, laying out plots, planting.

## MAY

**Plant Studies**—Identification of weed seedlings in garden—Study of fruit blossoms and formation of fruit—Practice in proper method of planting fruit or shade trees.

**Arbor Day**—Organization for school ground improvement—Local bee to clean, level, plant trees and shrubbery, mend fences and outbuildings, prepare garden, improve road in front of school—Sports and social.

**Animal Studies**—Earthworm, bee, toad, beneficial birds, particularly in relation to agriculture.

**Garden Work**—Class instruction and exercises in thinning, mulching and weeding—Studies of seedlings' development—Setting out of window boxes and hanging baskets.

## PLAN OF SCHOOL GARDEN, HOME PROJECTS, Etc.

Showing location with respect to school—Area—Flower beds—Experiments and demonstrations—Vines and shrubbery planted—School ground improvement undertaken—Work undertaken by School Progress Club or pupils at home—Plans for supervising—How supervised and results of experiments.

## JUNE

**Plant Studies**—Studies of flower structures such as corn, wheat, potato, tomato—Spraying for plant diseases.

**Road Improvement**—Principles of good road making—An ideal country road—Improvement of road in front of school.

**Class Excursion**—Directed excursion to Agricultural College or other Experimental Farm for older pupils.

**Insect Studies**—Work of common injurious insects such as cutworms, codling moth, oyster shell bark louse, cabbage butterfly and remedies.

**Garden Work**—Leaving all garden work in good shape—Definite arrangements for the care and protection of the garden during holiday, for observations and necessary harvesting.



**SUMMER HOLIDAYS**

Indicating how the garden was cared for, and what work was done, also condition at school opening.

**SEPTEMBER**

**Plant Studies**—1. Weed study excursion—Preparation of mounted collections—Seed collections—Identification tests—Methods of eradication.

2. Pupils' selection of corn in standing crop for seed and exhibition.

**School Fair**—Display of Progress Club's products (home made articles, poultry, potatoes, oat sheaves, etc., by boys, and sewing, cooking and canning by girls), garden produce, collections, demonstration of experiments carried out at school—Judging and awarding of prizes of books, bulbs, etc.

**Insect Studies**—The housefly, its structure, habits, life history and suppression—Estimation of damage by codling moth.

**Reading**—Selection and purchase of agricultural books for school and home libraries. A Farmer's library—Winter's reading plans.

**OCTOBER**

**Plant Studies**—1. Collections of apples and other fruits for competition and judging—Talk by local fruit grower—Testing pupils' ability to recognize varieties—Methods of packing and shipping.

2. Collections of injured or imperfect fruit—Causes and remedies.

**Farm and Orchard Work**—1. Threshing—Storage of crops—Model Barns—Silos—Estimates of yields—Determination of weights of bushels of grain.

2. Fall preparation of soil—Implements used and problems on cost of plowing, etc.

3. Fall pruning—Practice on neglected trees—Cover crops.

**Garden Work**—Taking cuttings and plants from garden for school or home windows or wintering over—Planting bulbs in school border or forcing for winter bloom—Fall preparation of school garden, cleaning, manuring, and plowing.

**NOVEMBER**

**Corn Fair**—Collections of selected corn for competition—Judging competitions—Reading prize essays.

**Farm Work**—Wintering the farm animals—Good stabling and up-to-date appliances—Feeding—Care of poultry—Best hen houses.

**Reading**—Class debates, discussions on agricultural topics.

**Physical Science**—Simple experiments on air.

**DECEMBER**

**Animal Studies**—Breeds of farm poultry—Visits to poultry or live stock shows—Survey and census of local poultry industry—Marketing poultry.

**Reading**—Reviews of subjects read up by pupils in books, papers or bulletins.

**Physical Science**—Practical exercises with thermometers—Use of dairy thermometer—Weather records.



**TEACHER'S REMARKS**

Teacher will please report here on the value of the work and the difficulties encountered—Suggstions for improvement of scheme—List of supplies and books purchased—List of things needed yet—Results of experiments, etc.

**TEACHER'S ENDORSEMENT**

I hereby certify that I have carried out to the best of my ability the instruction in agriculture as required under the regulations set forth in Circular 13 and that the above is a true statement of work done in this school.

Dated at..... on .....  
 ..... 191 .  
 Teacher.

**Note.**—If the work has been continued after summer holidays by a second teacher, endorsement should be made by both teachers. The first teacher should also state to what address her grant should be sent.

**INSPECTOR'S REPORT**

The Inspector will please report here on the character of the work so far as he has seen it in his inspections with any further comments or recommendations.

Dated at.....  
 on.....191 .  
 Inspector.

**NOTE.**—This report is to be forwarded to the Inspector, who will transmit it to the Minister of Education.



# ONTARIO DEPARTMENT OF EDUCATION

## Publications Relating to Agriculture

*Copies of these publications have been sent to all the schools concerned, and teachers should see that they are retained in the schools for reference. So far as the supply will admit of it, additional copies are sent to teachers or others requesting the same. Some of the circulars are for pupils' use; additional copies of these are furnished free to teachers who make use of them in the classes. Address Director of Elementary Agricultural Education, Ontario Agricultural College, Guelph.*

### Circulars and Charts

	1908....Improvement of School Grounds.
	1909....Plans for Rural School Buildings.
Circular 47,	1907....Equipment for Agricultural Department in High Schools.
Circular 47½,	1911....Regulations and Courses of Study for High School Agricultural Departments under District Representatives.
Circular 13,	1912....Regulations Relating to Elementary Agriculture and Horticulture and School Gardens, with a survey of the Work in Ontario in 1911. ( <i>Replaced by this Circular.</i> )
Circular 13A,	1912....Children's Gardening. ( <i>For Pupils.</i> )
Circular 13B,	1913....Spring and Summer Courses for Teachers at the Ontario Agricultural College, Guelph.
Circular 13D,	1912....Alfalfa or Lucerne. ( <i>For Pupils.</i> )
Chart No. 1,	1912....Alfalfa or Lucerne.
Circular 13E,	1912....On the Best Time to Sow Spring Grains. ( <i>For Pupils.</i> )
Chart No. 2,	1912....On the Best Time to Sow Spring Grains.
Circular 47(A),	1912....Regulations <i>re</i> B.S. (Agr.) Courses at Universities and O.A.C.
Circular 13M,	1913....Rural Education Conference and Inspectors' Short Course, O.A.C.
Circular 13N,	1913... High School Science Teachers' Course in Agriculture, O.A.C.
Circular 13(1),	1913....Regulations, Courses of Study, etc., relating to Agriculture and Horticulture in High and Continuation Schools.

### Agricultural Education Bulletins

No. 1 (13G) Jan.,	1913....The Story of an Ontario School Garden.
No. 2 (13F) Jan.,	1913....Agriculture in the Schools of Ontario.
No. 3 (13H) Feb.,	1913....Suggestions and Helps for Teaching Agriculture and Carrying on School Gardening.
No. 4 (13I) Mar.,	1913....The Dominion Agricultural Instruction Act, etc.
No. 5 (13J) Mar.,	1913....The Carleton County Potato-Growing Contest, 1912.
No. 6 (13K) Apr.,	1913....School Improvement and Arbor Day.
No. 7 (13L) May,	1913....Signs of Progress in 1913.
No. 8 (13O) June,	1913....Nature Collections for Schools.

### Instruction Sheets

In addition to the circulars, bulletins, and charts, listed above, the *Schools' Division of the Experimental Union* sends *Instruction Sheets* with the planting material sent out for school gardening purposes. Additional copies of these are sent free for pupils' use.

- No. 1, 1912....School Experiment with Lettuce.
- No. 2, 1912....School Experiment with Onions.
- No. 3, 1913....School Experiment with Beets.
- No. 4, 1913....School Gardening Experiments and Demonstrations.
- No. 5, 1913....School Progress Club Organizations and Instructions for Canning for Girls' Canning Clubs.
- No. 6, 1913....Corn Clubs for Ontario Schools.







Printed by WILLIAM BRIGGS, Toronto.







